Chapter - III

Management and the organization

Management plays a crucial role in co-ordinating various activities in the organization. In industries like the machine tools, the responsibility of the management is more crucial for the spread of technology to other industries. As Nathan Rosenberg puts it, "the machine tools industry as a result of technological convergence, played a unique role both in the initial solution of the technological problems and in the rapid transmission and application of newly learned techniques to other users. We suggest that the machine tool industry may be regarded as a centre for the acquisition and diffusion of new skills and techniques in a machinofacture type of economy. Its chief importance, therefore, lay in the strategic role
in the learning process associated with industrialization. "1

The Hyderabad unit of HMT specialises in the special purposes machines. The latest in the machine tool technology consists of computerised numerical control (CNC) machines. Advanced countries widely use this technology in various areas of industrial production. Inspite of the claim of sophistication, Indian machine tools industry has not kept pace with CNC machine production. Although HMT supplies technology to the other third world countries, it is not in the area of CNC machine production.

An R & D unit within a company such as HMT has two types of tasks, viz., improvement in the current technology through minor innovations and working at the frontiers of technology to introduce more advanced

concepts of machine tools present in the advanced countries. As far as the more mundane task of constant improvement of machines which have a large current market, it appears that very little work is done by the R & D group. This is very unfortunate. Since the potential for improvement in the existing technology has to be fully exploited through more efficient use of materials and energy such an approach could be of great importance for the Indian industry.

Since a few years the R & D group had been concentrating on computerised numerical control machines. Their development is discussed in this section below.

Aspects of technology - CNC machines

Sunil Mani, one of the researchers of public enterprises explains, "at least some of the products claimed to have been developed by the firm (HMT), like
CNC machines for instance is not just the output of in-house R&D, but also due to the joint development agreements which they had with other partners. However, it is quite significant that none of these innovations have been patented implying thereby that they do not appear to be innovations of a major nature."

There are various problems in the production of CNC machines. The application of CNC machines is still limited in the Indian industries. The application of CNC machines is still limited in the Indian industries. Hence the production of CNC machines for specific users is restricted.

Some of the components of the CNC machines, viz. the DC Drives and Software should be of high quality. Although Indian companies like Fenner Drives or Telco Produc these components, HMT opts for importing them.

because of their uncertain quality. The Indian components, the managers pointed out, cause problems of long term maintenance of machines to the users and as a result bring down the production values of HMT products. This situation suggests lack of indigenisation of foreign technology. The dependence on foreign inputs results in the escalation of costs of high-tech products such as the CNC machines.

A CNC machine developed with the help of KTM (Germany) was on display at the machine tool exhibitions held at Bombay and later in Germany (in 1990). This machine has not been produced for sale yet. The team of engineers who developed this system voice their disappointment. One of the engineers said that the productionising of this machine was stalled due to internal politics. The leader of the team is in conflict with his superior in the hierarchy.
The HMT machine tools division depends on foreign collaborations for aggradation of technology. This technology has been absorbed to achieve higher levels of self-sufficiency and also to contribute to the export potential, especially to the other third world countries. But, as one of the managers put it, "with 35% of the market share and a near monopoly in the sphere of special purpose machines, the HMT should have attained much more." In the machine tools area the change is rapid: a simple absorption of one type of imported technology does not result in independence from foreign technology. Innovation and R & D have to be in-built in the system. The sluggish system of public sector enterprise like HMT has not been able to keep pace with the internationally generated technological development. Our concern here is not to undermine the achievements of HMT but to highlight the
negligence of R & D in pioneering areas like the CNC machines. Many of the managers are aware of the internal problems associated with employee morale and co-ordination of production activities with R & D but feel themselves helpless.

Some of the requirements of machine tools by Indian companies are not within reach of production for HMT. The defence factory in Avadi continues to depend on foreign components in the production of T-72 tanks. The Avadi factory purchases its requirements from 'Shies', a German company. The high-precision machines imported by the company require maintenance and for this job the Avadi factory has an arrangement with HMT. The personnel of HMT receive their training in 'Shies' and in turn help Avadi to maintain its machinery from time to time. The technical knowledge of these personnel is put to use by HMT in devising high-tech machinery and to improve its parameters of capacity and quality of production. HMT, through this method, could
improve the production of vertical turning layers horizontal boring machines. But in the production of these machines HMT encounters the problem of raw material and poor quality of components. The raw material available in India is not upto the standard and the components made with this material do not withstand the load. This factor forces HMT to turn to the foreign companies for components. It proves extremely beneficial to the foreign companies to supply not only technology but the subsequent flow of components. The Indian companies and the process of indigenisation suffer.

**Impediments to efficient management - Caste**

The issue of promotions in the managerial cadre complicates their performance. The SC's and the ST's receive their promotions on a priority basis and after every block three years of service. The promotion of the rest depends on the availability of vacancies and
on considerations of merit. With very few vacancies in the managerial cadre, the managers belonging to the reserved categories supersede their senior within a short period of time. The following diagram illustrates, the quick promotions and resultant influence of 'caste' in the authority structure.

The following diagram shows how the reserved category employees attain quick promotion inspite of the lack of vacancies

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In HMT there are many instances of reserved caste category juniors in service who are commanding the seniors.
With vacancies becoming scarce, there is fierce competition among the non-reserved categories for promotions. The managers explain the presence of the rampant casteism in promotion and recruitment as originally due to the introduction of the caste factor in the case of reserved castes. It was suggested by some informants that those managers who belonged to the caste of the General Manager received quicker promotions. Caste related favouritism was also brought out in relation to the selection of personnel to be sent abroad for training, and the promotion to key managerial positions. The caste factor is often strengthened by the fact that it overlaps friendship networks as well. The longer the existence of a caste in the organisation, greater the possibility of informal factors underlying favouritism, helping its members to be ahead in competition. Various issues became highly politicised due to the factor of caste. The tradition of favouritism based on caste is
generally expected. Although managers complain of inefficiency due to this factor usually referring to the isolated cases of lower caste promotions. However, they themselves engage in it when in position of power. This probably is at least one reason which explains the continued dominance of the dominant castes such as Brahmins, Reddys & Kammas in the HMT management cadre.

* An association of backward classes exists in HMT. This association consists of employees of all grades including the managers belonging to the backward classes. When a worker of this association faces a problem, a manager belonging to the same association comes to his rescue. In this way the association bridges the difference between a section of managers and workers. This association, indulges in pressure group politics in the organisation. Since the representation of backward classes is a politically sensitive issue, the management handles it through compromise. However, this produces envy among the rest
of the workers. Their quick promotions and other privileges affect other workers and they express their unhappiness openly. the caste based politics of the workforce affects the productivity and the management is increasingly finding it difficult to maintain a healthy atmosphere of work.

Worker-supervisor relationship - The power game

The officers association, which by and large comprises of middle and lower management cadres is not officially recognised and has a comparatively weaker bargaining strength as compared to the workers' union, the officers' association is not able to handle their grievances especially when the issues also involve the trade-union members. As a result many supervisors feel a sense of 'powerlessness'. They feel that they have no say in the decision-making process at any level. They are also not organised enough to raise their voice against the top management. they are accountable to
the top management for realising the production targets while the workers' cooperation is fitful. The supervisors neither have the collective strength that the workers enjoy nor are they vested with enough authority or power in the formal chain of command to handle situations fearlessly at their levels. In an incident of a worker being caught sleeping in the workplace, the concerned supervisor initiated action against the erring worker. The worker pushed his case through the union and claimed that the supervisor, because of personal grudges, had foisted false charges. Since there was no evidence for the incident, the supervisor was unable to prove the charge. The final outcome of the proceedings resulted in the supervisor being transferred to another department and the worker escaped without punishment. The supervisors very rarely initiate action against workmen. Unless the management adopts a conscious policy of tightening the implementation of rules, the supervisors, in the normal course of doing their jobs, do not use the official
rules because of the fear of retaliation by the workers' union. The end result is that the production suffers in quantitative and qualitative terms. As on of the, supervisors explains, "There are several activists in all departments who are given to violent ways. They shirk work but ensure that we do not report the matter to the authorities. Some of us infact, perform their work and meet the work targets in order to avoid the wrath of the management. Those of us who have risen from ranks escape the mischief created by the negative elements as we have our own contact with the union and other workers. The new managerial appointees, unfortunately get victimised for the truancy of the mischievous elements."

The lamps division

The plight of lamps division is a clear example of the difficulties a public enterprise faces in competition with the private sector. The HMT lamps
division manufactures lamp chains, which consist of the total apparatus of lamp-making from caps to filament and dome. Unfortunately the new manufacturers of bulbs in India are preferring the imported lamp chains. Because of the poor sales of lamp chains, the HMT now depends on the production and sale of bulbs in competition with imported technology led by multinationals. In the extremely competitive market pricing and marketing policies determine sales and profits. The HMT follows Philips, the market leader in its pricing policy. But the margin of profitability of Philips is much higher as compared to HMT bulbs. Excess manpower is one of the crucial reasons for high production cost of the HMT bulbs. In addition to the excess manpower, the workers of the lamps division are comparatively younger and active in trade-union politics. Any effort to reduce manpower immediately causes a revolt in various departments. The private sector dominates the network of retail sales. The absence of emphasis on retail sales results in poor
sales and losses. Inspite of a market share of nearly 10%, the HMT is not a profitable concern.

The issue of corruption

HMT employs qualified sales executives to scout for prospective customers and increase sales. The sales executives are required to visit different places to convince the customers of the quality and price of products. These sales executives, it is alleged, instead of pushing the products of HMT, succumb to the manipulations of the competitive firms. Workers observe that more often than not, the sales executives, when on tours to promote sales, are known to divert the order to the competitive firms. By doing so, they benefit in two ways. First, they receive the traveling expenses and other allowances from HMT and second, they also receive commission from competitive firms for providing them with orders. The example, if correct, suggests ineffective control over the activities of employees. The private sector engages in a high
pressed marketing and is thus able to retain its dominant position. While the entry of public sector in the area of consumer goods like lamps can be questioned on the grounds that lamps are neither strategic nor a basic input for any other industry, the loss of millions of rupees on this product seems unjustifiable.

Quite apart from the already discussed problems of the lamps division, a union official in a discussion pointed out the following factors –

1. The purchase of packing material in the form of corrugated role boxes and gum tapes is effected to the tune of rupees one crore per annum. Nearly 40 to 50 per cent of this purchase goes waste because of the cheap quality of the material. The allegation from the union is that the management gets a cut in the purchase of the cheap quality material.
2. An important member of the management, for his personal gain reduced prices of lead glass tubes to the extent of Rs. 6 to Rs. 7 per kilogram and sold it to one M/s. Panama Electricals of Calcutta. The union has lodged a complaint with the management indicating the purchase of bulk components as scrap by Panama Electricals. It was pointed out that this company is manufacturing duplicates of HMT bulbs. The management is also responsible for selling the lead-in-wire machines to this company. These machines were bought by HMT by spending precious foreign exchange.

3. The machine tools division has its share of such practices. Machine designing is an important aspect of manufacturing which can be undertaken by well qualified personnel.
HMT has a designing department which employs qualified personnel. A private company (MTAR of Balanagar) situated near HMT also produces identical machines. The owner of the company infact was a manager of HMT before he started his own company. The machines produced by the private company cost less and therefore enjoy a natural advantage of lower price. The workers in the design department of HMT say that it is not possible for two different companies to produce machines with identical designs unless there is a leakage of designs to the competing firm. When the competing firm secures the design of a machine, it can reduce the cost of production because the investment required for designing is saved. It is alleged that HMT is losing its business to competing firms because of such practices.

While the spread of such information against
management is creating problems of morale among the workers, low morale is affecting the attempt of the management to revive the company. Although individual managers should be held responsible for such practices, the entire management is branded as responsible for such acts because of which even genuine acts of the management are skeptically viewed by the workers.

Profits in public sector

During the year 1990-91, while the target for machine tools division was to complete Rs. 52 crores worth of production, till December '90 only Rs. 12 crores worth of production had been achieved. In the remaining months (three months), the targeted production of approximately Rs. 40 crores was achieved. The engineers pointed out the various methods by which the targets are shown as achieved on a paper. Before the month of March, incomplete machines are 'sold' to the user industries and the remaining part of the work-
completion is effected at the erection site of the buyer. The engineers of the servicing department complain that they had to be outside HMT for much of the time during a year to erect incomplete machines. The buying of incomplete machines helps the other public enterprises because they can spend the allotted government budget within the financial year. Similarly, the Banks which offer loans can also register the amounts of loans as offered before the closure of the financial year. The engineers give the examples of BHEL and Railways where the service engineers of HMT are still completing the unfinished machines sold in the previous year i.e. 1989-90. "Fulfilling the target" in HMT is thus highly dubious. Quality of production is seriously affected by such practices.

The HMT is not only a company producing commodities, but the capabilities of its technical personnel are often used by other public sector
concerns for repairing and re-erection of machines. Some of the income and profits are generated by these technical/consultancy service. In the erection of the Railway conveyor (wheel and axil), the company earned a profit of nearly Rs. 4.5 crores. Similarly, in the dismantling and re-erection of old machinery at BHEL, Haridwar plant, HMT earned huge profits. The HMT has also undertaken re-conditioning of machinery at BHEL, Hyderabad and at Durgapur steel plants. This kind of work, though beneficial for the company, is in no way related to the actual goal of the company which is the production of quality machine tools. These activities which should be subsidiary to the main activity of machine tool production, are often providing a major proportion of the profit. Since the profits of a public sector concern are earned from performing work in another public sector concern, there is sometimes a feeling that the turnover and profits are being increased through collusion between managements of public sector concerns. There is need for proper
monitoring of these activities by impartial technical experts.

**Hierarchy - the role of General Manager**

It can be seen that a policy decision has to pass through the hierarchy of managerial positions to reach the level of implementation. At various levels, the co-ordination of management is very crucial for the formulation of guidelines. The general manager provides a direction to the various operations of the management. Each general manager brings with him a style and a pattern of functioning. When Krishna Urs was the General Manager it seems the material purchases were systematically planned. A pre-planned budget for purchases led to approaching the right seller who not only offered credit but also supplied good quality material in appropriate quantity. Prior to Krishna Urs's tenure, the arbitrary spot purchases had resulted in the purchase of poor quality raw material at excess cost. Similarly, the following illustration explains
how the policies of the top management affect efficiency of the worker. Although lamps division has the required machinery to manufacture all the components for making bulbs, some components are bought from a private firm. Workers argue that some of the officials of the lamps division who had links with the private company, obstructed the manufacturing of components within the factory. At one time this was facilitated by the fact that the technical supervisors, who were trained by the foreign experts to handle the imported machines, had left the company. Some workers pointed out to the management that they were confident of operating the machines which were idle. The management did not bother to consider their offer. This situation prevailed till the appointment of a new General Manager. The new General Manager took initiative and gave the workers an opportunity to prove their efficiency. He was enlightened enough to allow the workers to operate the machines and prove their mettle. The workers on their part were successful in
operating the machines. The purchase of components from the private company was stopped which helped in reducing the cost of production. The revival of idle machines is considered a significant achievement by the workers. They feel that given the right attitude of the management, the workers will go to the extent of assuming a lot of responsibility to make the organization sound.

In another incident, when the corruption charges by the union were not yet taken up for investigation, the management, without a complete grasp of the causes for the deteriorating economic situation, concentrated on stepping up the production by increasing the speed of the machines. The work load consequently increased and the workers viewed it as arbitrary. The increase in the workload not only put strain on the workers but also resulted in higher wastage of raw materials. The workers explained, "when the speed of the machine was increased, our movement on the machine became so rapid
that it could not provide us with enough time for careful utilization of raw material. For example, the bulbs are generally put on slots on a rotating disc at a pre-determined speed. Because of the increase of the speed of the disc some of us could not keep up with the speed and due to improper handling, wasted a lot of material. The bulbs either broke or did not light up." Hence even if the production increased, the cost of production also went up. The very purpose of increase in production was defeated. Such policies adopted by the management and ratified by the General Manager not only created distrust among workers but also contributed to the already deteriorating financial situation.

Broadly, the functioning of a General Manager affects the following factors,

a) the policy concerning the disciplinary issues,
b) the decisions concerning the pace of production and the procedures to implement the production schedule,

c) the guidelines concerning the approach to handle the union, and

d) the orientation of managers towards the objectives of the company. This aspect is related to the informal cliques that form part of any managerial set up.

Five General Managers operated within a span of 15 years. It can be observed that the frequent changes of General Managers in HMT adversely affected all the above listed issues.

Personnel

The HMT had been facing an artificial shortage of highly qualified manpower. For each technical
collaboration with a foreign country, personnel are sent abroad for training. They undertake a service bond of three years which legally restricts them from moving out of the company for that period. Invariably, after three years, they take up jobs in private sector where they are offered attractive salaries and better working environment. The computer professionals in particular do not find employment in public sector attractive. The computer-professionals are in short-supply in the high-tech areas in India. The private sector offers very attractive salaries to those personnel trained abroad. As discussed earlier, the production of CNC machines gets affected by the migration of the trained personnel. In addition to the unattractive salary structure, the career growth in public sector is hampered by reservations and highly politicized environment. In general, the problem of turnover of trained workers to the private sector is a major problem.
The various issues discussed earlier contribute to the overall functioning of the organization. The following diagram illustrates how the global industries gain competitive advantage.³

This diagram illustrates how the margin of profit of a firm is dependent upon the efficient coordination of various activities. As explained earlier, in various activities like planning, human resource management, technology development, procurement, marketing etc. HMT has serious drawbacks. As a consequence the cost of production is very high. As the following diagram illustrates, a firm has to maintain standard performance in various activities.\(^4\)

Apart from the non-establishment of performance values in the various spheres explained above, the analysis of HMT can be attempted by viewing machine

tools as a global industry. The main link of HMT to the global industry being technology, the other determinants of national advantage explain the survival of HMT.⁵

5. Porter E Micheal, 1990 Ibid.
Factor conditions. Land Labour, Capital etc.

In factor conditions, HMT has a natural advantage of being a public sector concern. There is no inadequacy of land and capital. However, it could be observed that the labour policy was ineffective in retaining qualified technical personnel. Similarly, with regard to capital, regeneration from within was not possible.

Demand conditions

HMT started off with perfect demand conditions. Being a monopoly in various categories of machine tools a ready market exists for HMT. But after the initial advantage, the consolidation of demand was not possible. Buyers now find it advantageous to import machine tools. The process of indigenisation was not smooth and also HMT could not keep pace with rapid
technological change. In the changed market condition when HMT no longer has a monopoly in various categories of machine tools, there is an urgent need for alternative strategies based on,

1. concentration on capital intensive and high-tech areas of machine tools,

2. concentration or supportive R & D,

3. complete rethinking on manpower in line with
   a) higher technological status of company
   b) improved retraining facilities
   c) pruning labour and management costs through modernisation of the organization.

Related and supporting industries

Raw material and components are the key inputs from supporting industries. There is unfortunately a dearth of quality raw materials and components. This
factor results in a major burden for HMT because both raw material and components have to be imported. To avoid this situation, the HMT can play a positive role through its R & D and extension services in improving the quality of raw materials and components which is dependent upon higher technological status of ancillary and supplier industries.

Firm strategy, structure and rivalry

The strategy of HMT has changed over a period of time. The initial euphoria around special purpose machines did not last long, due to high cost of production, the margin of profit became less because of which the HMT had concentrated on general purpose machines. But after the 80's, the general purpose machines proved less profitable because the private sector vigorously entered the market. As discussed earlier, the structure of HMT is too large and its
management lacks maneuverability which is the key requirement for competitive market conditions. This is illustrated by the political interventions in retaining the unproductive manpower and the control over investment in high-tech areas by the government which itself is slow moving and unresponsive to changing market conditions. The government policy acted as a crucial determinant of HMT's performance. The HMT till 80's had enjoyed protected market. The shift of government policy towards import liberalisation has thrown HMT open to international competition. As trends indicate, the government is inclined towards further liberalisation due to global economic pressure. It is essential to note that HMT could not consolidate its initial advantage to face global competition. The adaptation to the new policies is not just the concern of HMT but many public sector enterprises in the high-tech areas.